No. SEIAA/2017/298  REGISTERED  Date: 24.4.17

To

Dr. Rajendra Badhwe, Director
Tata Memorial Centre,
Tata Memorial Hospital,
Dr. E. Borges Marg, Mumbai-400012

Subject: Environmental clearance under EIA notification dated 14.09.2006 for establishment of Hospital namely Homi Bhabha Cancer Hospital and Research Centre at Plot No. 01, Medicity, Mullanpur Village, Mohali District, Punjab by TATA Memorial Centre, TATA Memorial Hospital, Mumbai (Proposal no. SIA/PB/NCP/58716/2016)

This has reference to your application for obtaining Environmental Clearance under EIA notification dated 14.09.2006 for establishment of Hospital namely Homi Bhabha Cancer Hospital and Research Centre at Plot No. 01, Medicity, Mullanpur Village, Mohali District, Punjab and subsequent presentation given before the State Level Expert Appraisal Committee (SEAC) for seeking prior environmental clearance for subject cited project as required under the EIA Notification, 2006. The proposal has been appraised as per procedure prescribed under the provisions of EIA Notification dated 14.09.2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, 1-A, conceptual plan and the additional clarifications furnished in response to the observations of the SEAC.

It is inter-alia noted that the proposal involves construction of Hospital namely Homi Bhabha Cancer Hospital and Research Centre at Plot No. 01, Medicity, Mullanpur Village, Mohali District, Punjab. The total plot area of the project is 202343 sqm and the total built up area is 43000 sqm. The hospital will consist of 300 beds including Nurses Hostel, Resident Doctors Hostel, Dharamshala, Canteen, Service Block, Recreational Facilities and Site Infrastructure development work like road, sewer line, Drainage work, parking Area, Landscaping, electrification, water supply, waste disposal system etc. as per standard laid down by Medical Council of India (MCI). The total cost of the project is 218 crore.
The project land has been earmarked for the development of Cancer Hospital & Research centre by GMADA. The Estate officer, GMADA on behalf of the Deptt. of Health & Family Welfare, Govt. of Punjab vide memo no. 4119 dated 24.08.2012 has given the possession of 50 acre land for the purpose of setting up of Cancer Hospital to the project proponent. The project proponent has submitted conceptual plan of the project site. The total estimated population of the project will be 2267 persons out of which residential population will be 217 persons, patient will be 300, inhouse/ commercial will be 250 and floating/visitors will be 1500 persons.

The total water requirement for the project will be 328 KLD including fresh water requirement of 156 KLD, which will be met through Punjab Water Supply & Sanitation Department. The total wastewater generation from the project will be 172 KLD after treatment in STP of capacity 230 KLD which includes wet weather flow. The project proponent has proposed to utilize 66 KL/day of treated wastewater for flushing purpose, 40 KLD for cooling make up water and remaining 66 KLD for horticulture purposes, in summer season. In winter season, 66 KL/day of treated wastewater for flushing purpose, 30 KLD for cooling make up water, 56 KLD for horticulture purpose & remaining 20 KLD will be stored in additional storage tank. In rainy season, 66 KL/day of treated wastewater for flushing purpose, 40 KLD for cooling make up water, 46 KLD for horticulture purpose & remaining 20 KLD will be stored in additional storage tank. No treated waste water will be discharged into sewer or outside the premises. The project proponent has proposed to re-utilize maximum treated waste water within the premises and remaining will be supplied to nearby construction projects.

The total quantity of municipal waste generation will be 955 kg/day, which will be segregated as biodegradable and non-biodegradable components as per the MSW Rules, 2016. The biodegradable organic wastes will be converted to manure by using mechanical composting. Non-biodegradable waste & Recyclable waste will be sold to authorized venders and inert solid waste will be sent to concerned collection centre of Municipal Solid waste management facility. The total quantity of Biomedical waste generation will be 239 kg/day which will be handled and managed as per the provisions of the BMW Rules, 2016 with the approval of Punjab Pollution Control Board. The project proponent has proposed to follow radioactive waste management program to utilize different radioactive equipment’s/material in order to mitigate the effects of atomic radiation at the site.
The total load of electricity required for cancer hospital will be 4800 KVA, which will be taken from the PSPCL. There is a proposal to install 4 nos silent DG Sets (3X 1500 KVA & 1 x 750 KVA) as stand-by arrangement for power back-up. The project proponent has also proposed to utilize LED lamps, solar lights and other energy efficient electrical gadgets in the project to conserve energy. Solar power plant of 1.0 MW capacity has also been proposed to utilize solar energy. The E-waste generated will be stored in an isolated room and will be sold to the manufacturers as per E-Waste (Management), Rules 2016.

Environmental Management Cell of the hospital will be responsible for implementation of EMP during construction as well as in the operation phase. During construction phase, Rs. 61.5 Lacs will be incurred on account of capital cost and during operation phase, Rs. 23.5 Lacs per annum on account of capital cost and Rs. 20.1 lacs/annum as recurring cost for implementation of EMP. The project proponent has also proposed to provide cancer health care to indigent section of nearby surrounding areas at highly subsidized cost towards CSR activities as per the provisions of the CSR Rules.

The case was considered by the SEAC in its 154th meeting held on 03.01.2017 and lastly 155th meeting held on 23.02.2017, wherein, the Committee awarded 'Silver Grading' to the project proposal and decided that case be forwarded to the SEIAA with the recommendations to grant environmental clearance to the project proponent subject to certain conditions in addition to the proposed measures.

Thereafter, the case was considered by the SEIAA in its 120th meeting held on 16.03.2017, wherein, the Authority noted that the case stands recommended by SEAC and the Committee awarded 'Silver Grading' to the project proposal. Therefore, the Authority decided to grant environmental clearance for establishment of a Hospital namely Homi Bhabha Cancer Hospital and Research Centre having total plot area of the project as 202343 sqm and built up area of the Project as 43000 sqm. located at Plot No. 01, Medicity, Mullanpur Village, Mohali District, Punjab, subject to the conditions as proposed by the SEAC in addition to the proposed measures. Accordingly, SEIAA, Punjab hereby accords necessary environmental clearance for the above project under the provisions of EIA Notification dated 14.09.2006 and its subsequent amendments, subject to the following conditions in addition to the proposed measures:
PART-A – Conditions common for all the three phases i.e. Pre-Construction Phase, Construction Phase and Operation Phase & Entire Life:

(i) This environmental clearance will be valid for a period of seven years from the date of its issue or till the completion of the project, whichever is earlier.

(ii) Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

(iii) A first aid room will be provided in the project both during construction and operation phase of the project.

(iv) Construction of the STP, solid waste, e-waste, hazardous waste, storage facilities tubewell, DG Sets, Utilities etc, earmarked by the project proponent on the layout plan, should be made in the earmarked area only. In any case the position/location of these utilities should not be changed later-on.

(v) The environmental safeguards contained in the application of the promoter / mentioned during the presentation before State Level Environment Impact Assessment Authority/State Expert Appraisal Committee should be implemented in letter and spirit.

(vi) Ambient air & noise levels should conform to prescribed standards both during day and night. Incremental pollution loads on the ambient air quality, noise especially during worst noise generating activities, water quality and soil should be periodically monitored during construction phase as well as operation & entire life phase as per the Ministry of Environment, Forests & Climate Change guidelines and all the mitigation measures should be taken to bring down the levels within the prescribed standards.

(vii) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest (Conservation) Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, by project proponents from the competent authorities including Punjab Pollution Control Board and from other statutory bodies as applicable.

(viii) The State Environment Impact Assessment Authority, Punjab reserves the right to add additional safeguards/ measures subsequently, if found necessary, and to take action including revoking of the environmental clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguards/ measures in a time bound and satisfactory manner.

(ix) A proper record showing compliance of all the conditions of environmental clearance shall be maintained and made available at site at all the times.

(x) The project proponent shall also submit half yearly compliance reports in respect of the stipulated prior environmental clearance terms & conditions including results of monitored data (both in hard & soft copies) to the respective Regional office of MoEF, the Zonal Office of CPCB, the SPCB and SEIAA, Punjab on 1st June and 1st December of each calendar year.

(xi) Officials from the Regional Office of Ministry of Environment & Forests,
Chandigarh / State Level Environment Impact Assessment Authority / State Level Expert Appraisal Committee / Punjab Pollution Control Board who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to State Environment Impact Assessment Authority should be forwarded to the APCCF, Regional Office of Ministry of Environment & Forests, Chandigarh.

(xii) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by State Environment Impact Assessment Authority, Punjab.

(xiii) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project and decisions of any Competent Court, to the extent applicable.

(xiv) The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF & CC, SEIAA, Punjab the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels for all the parameters of NAAQM standards shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

(xv) The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring unrestricted flow of water.

(xvi) The unpaved area shall be more than or equal to 20% of the recreational open spaces.

PART-B – Specific Conditions:

I. Pre-Construction Phase

(i) “Consent to establish” shall be obtained from Punjab Pollution Control Board under Air (Prevention & Control of Pollution) Act, 1981 and Water (Prevention & Control of Pollution) Act, 1974 and a copy of the same shall be submitted to the Ministry of Environment & Forests / State Level Environment Impact Assessment Authority before the start of any construction work at site.

(ii) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

(iii) The approval of competent authority shall be obtained for structural safety of the buildings due to earthquakes, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightning.

(iv) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, disposal of waste water & solid waste in an environmentally sound manner, safe drinking water, medical health care,
crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

II. Construction Phase:

(i) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.

(ii) Disposal of muck generated during construction phase should not create any adverse effect on the neighboring communities and be disposed of after taking the necessary precautions for general safety and health aspects of people with the approval of competent authority. The project proponent will comply with the provisions of Construction & Demolition Waste Rules, 2016. Dust, smoke & debris prevention measures such as wheel washing, screens, barricading and debris chute shall be installed at the site during construction including plastic/tarpaulin sheet covers for trucks bringing in sand & material at the site.

(iii) Construction spoils, including bituminous material and other hazardous material, must not be allowed to contaminate watercourses. The dump sites for such material must be secured, so that they should not leach into the groundwater.

(iv) Vehicles hired for bringing construction material to the site and other machinery to be used during construction should be in good condition and should conform to applicable air emission standards.

(v) The project proponent shall use only treated sewage/wastewater for construction activities and no fresh water for this purpose will be used. A proper record in this regard should be maintained and available at site.

(vi) Fly ash based construction material should be used in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended on August, 2003 and notification No. S.O. 2804 (E) dated 03.11.2009.

(vii) Water demand during construction should be reduced by the use of ready mixed concrete, curing agents and adopting other best practices.

(viii) Adequate treatment facility for drinking water shall be provided, if required.

(ix) The project proponent shall provide electromagnetic flow meter at the outlet of the water supply, outlet of the STP and any pipeline to be used for re-using the treated wastewater back into the system for flushing and for horticulture purpose/green etc.

(x) The project proponent will provide dual plumbing system for reuse of treated wastewater for flushing/HVAC purposes etc. and colour coding of different pipe lines carrying water/wastewater/ treated wastewater as follows:

a. Fresh water : Blue
b. Untreated wastewater : Black
c. Treated wastewater (for reuse) : Green
d. Treated wastewater (for discharge) : Yellow
e. Storm water: Orange

(xi) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

(xii) Separation of drinking water supply and treated sewage supply should be done by the use of different colors.

(xiii) (a) Adequate steps shall be taken to conserve energy by limiting the use of glass, provision of proper thermal insulation and taking measures as prescribed under the Energy Conservation Building Code and National Building Code, 2005 on Energy conservation.

(b) Solar power plant of at least 1MW capacity shall be installed for utilizing solar energy. Also, LED lights shall be provided as proposed for illumination of common areas instead of CFL lights.

(xiv) The diesel generator sets to be used during construction phase should conform to the provisions of Diesel Generator Set Rules prescribed under the Environment (Protection) Act, 1986.

(xv) (a) Separate wet & dry bins for common areas for facilitating segregation of waste, collection centre and mechanical composter shall be provided for proper collection, handling, storage, segregation, treatment and disposal of solid waste.

(b) Bio-Medical waste to be generated in the hospital shall be handled and managed as per the provisions of Bio-Medical waste (Management & Handling) Rules, 2016.

(c) Radioactive waste management program, as submitted by the project proponent shall be followed at the site at the site in order to mitigate the effects coming out due to use of atomic radiation in different equipments.

(xvi) A rainwater harvesting plan shall be designed where the re-charge bores (minimum one per 5000 sqm of built up area) shall be provided. Recharging wells for roof top run-off shall have provision of adequate treatment for removing suspended matter etc. before recharging as per the CGWA guidelines. Run-off from areas other than roof top such as green areas and roads/pavement etc. may also be recharged but only after providing adequate treatment to remove suspended matter, oil & grease etc. and ensuring that rainwater being recharged from these areas is not contaminated with pesticides, insecticides, chemical fertilizer etc. As proposed by the project proponent, herbal fertilizers, pesticide & insecticide shall be utilized for green area for horticulture purposes.

(xvii) Green belt of adequate width as proposed shall be provided so as to achieve attenuation factor conforming to the day & night standards prescribed for the sensitive areas. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous species/variety. A minimum of one tree for every 80 sqm of land shall be planted and maintained. The existing trees may be counted for this purpose. Preference should be given to planting native species. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of three trees for every one tree that is cut) shall
be done with the obligation to continue maintenance.

III. **Operation Phase and Entire Life**

i) "Consent to operate" under Air (Prevention & Control of Pollution) Act, 1981 and Water (Prevention & Control of Pollution) Act, 1974, Authorization under Bio-Medical waste (Management & Handling) Rules, 2016 and Hazardous waste (Management, Handling & Transboundary) Rules, 2008 shall be obtained from Punjab Pollution Control Board and copies of the same shall be submitted to the Ministry of Environment & Forests / State Level Environment Impact Assessment Authority at the time of start of operation.

ii) The total water requirement of the project is 328 KLD including fresh water requirement @ 156 KLD and water supply will be supplied by the Punjab Water Supply & Sanitation Department.

iii) a) The total wastewater generation from the project will be 172 KLD after treatment in STP of capacity 230 KLD (considering wet weather flow). As proposed, reuse of treated wastewater and discharge of surplus treated wastewater shall be as below:

<table>
<thead>
<tr>
<th>Season</th>
<th>Reuse for flushing (KLD)</th>
<th>Reuse for Horticulture (KLD)</th>
<th>Reuse for Cooling Make up water (KLD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>66</td>
<td>66</td>
<td>40</td>
</tr>
<tr>
<td>Winter</td>
<td>66</td>
<td>56</td>
<td>30</td>
</tr>
<tr>
<td>Rainy</td>
<td>66</td>
<td>46</td>
<td>40</td>
</tr>
</tbody>
</table>

b) Additional Storage tank of capacity 138 KLD shall be provided for the storage of treated wastewater for winter & rainy season and all efforts shall be made to supply the same for construction purposes.

iv) The project proponent shall ensure safe drinking water supply to the residents/patients.

v) A proper record regarding groundwater abstraction, water consumption, its reuse and disposal shall be maintained on daily basis and shall maintain a record of readings of each such meter on daily basis.

vi) Rainwater harvesting/recharging systems shall be operated and maintained properly as per CGWA guidelines.

vii) The facilities provided for collection, segregation, handling, on site storage & processing of solid waste such as wet & dry bins, collection centre & mechanical composters etc. shall be properly maintained. The collected solid waste shall be segregated at site. The recyclable solid waste shall be sold out to the authorized vendors for which a written tie-up must be done with the authorized recyclers. Organic waste shall be composted by mechanical composters and the inert solid waste shall be sent to the concerned collection Centre of integrated municipal solid waste management facility of the area.

viii) Bio-Medical Waste/Hazardous waste/E-waste should be disposed off as per Rules applicable and with the necessary approval of the Punjab Pollution Control Board.

ix) Traffic congestion near the entry and exit points from the roads adjoining the
proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

x) The green belt along the periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for sensitive areas.

xi) Solar power plant and other solar energy related equipments shall be operated and maintained properly.

xii) A report on the energy conservation measures conforming to energy conservation norms should be prepared incorporating details about machinery of air conditioning, lifts, lighting, building materials, R & U Factors etc. and submitted to the respective Regional office of MoEF, the Zonal Office of CPCB and the SPCB/SEIIAA in three months time.

xiii) Environmental Management Cell shall be formed during operation phase which will supervise and monitor the environment related aspects of the project.

**PARTC – General Conditions:**

I. Pre-Construction Phase

i) The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Punjab Pollution Control Board. The advertisement should be made within seven days from the day of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office, Ministry of Environment & Forests, Chandigarh and SEIIAA, Punjab.

ii) The project proponent shall obtain permission from the CGWA for abstraction of groundwater & digging of bore well(s) and shall not abstract any groundwater without prior written permission of the CGWA, even if any bore well(s) exist at site.

iii) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

II. Construction Phase

i) The project proponent shall adhere to the commitments made in the Environment Management Plan for the construction phase shall spend minimum amount of Rs. 61.5 Lacs towards capital investment.

III. Operation Phase and Entire Life

i) The entire cost of the environmental management plan will continue to be borne by the project proponent. The project proponent shall spend minimum amount of Rs. 23.5 lacs as capital cost &Rs. 20.1 lacs/ annum recurring
expenditure as proposed in the EMP.

ii) The diesel generator sets to be provided shall conform to the provisions of Diesel Generator Set Rules prescribed under the Environment (Protection) Act, 1986. The exhaust pipe of DG set if installed must be minimum 10 m away from the building or in case it is less than 10 m away, the exhaust pipe shall be taken upto 3 m above the building.

Endst. No. 299 D 676

Dated 24-4-17

A copy of the above is forwarded to the following for information & further necessary action please.

1. The Secretary to Govt. of India, Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi - 110 003
2. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-office Complex, East Arjun Nagar, New Delhi.
3. The Chairman, Punjab State Power Corporation Ltd, the Mall, Patiala.
4. The Deputy Commissioner, SAS Nagar.
5. The Chairman, Punjab Pollution Control Board, VatavaranBhawan, Nabha Road, Patiala.
6. The Director (Environment), Ministry of Environment and Forest, Northern Regional Office, Bays No.24-25, Sector-31-A, Chandigarh. The detail of the authorized Officer of the project proponent is as under:
   a) Name of the applicant : Dr. Rajendra Badwe
   b) Contact no. : 022-24146631
   c) E-mail ID : Kalpnasm2001@yahoo.co.in
7. The Chief Town Planner, Department of Town & Country Planning, 6th Floor, PUDA Bhawan, Phase-8, Mohali
8. The Monitoring Cell, Ministry of Environment, Forest and Climate change, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi - 110003.